

Is There Any Defense Against Atomic Warfare?

Moderator, GEORGE V. DENNY, Jr.

Speakers

BRIEN McMAHON
LESLIE R. GROVES

HAROLD C. UREY

(See also page 12)

COMING —
February 22, 1949
Should We Adopt a Compulsory National Health Insurance Program?
March 1, 1949
Should Communists Be Allowed To Teach in Our Colleges and Universities?

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THE BROADCAST OF FEBRUARY 15:

"Is There Any Defense Against Atomic Warfare?"

Mr. DENNY	3
Dr. urey	4
General groves	6
Dr. BRADLEY	8
Senator MC MAHON	10
THE SPEAKERS' COLUMN	12
QUESTIONS, PLEASE!	15

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Town Meeting



BULLETIN OF AMERICA'S TOWN MEETING OF THE AIR
GEORGE V. DENNY, JR., MODERATOR



FEBRUARY 15, 1949

VOL. 14, No. 42

Is There Any Defense Against Atomic Warfare?

Announcer:

Friends, we're approaching a special occasion in the history of your Town Meeting and we want you to have a very active part in it. We know from your letters that this program means a great deal to you, as individual listeners and as members of local discussion groups.

From time to time, some of you suggest topics for future broadcasts. Your recommendations are always welcome. They help us decide on the subjects which will be of interest to the majority of our listeners.

Tonight, we want to extend an invitation to you, and ask you to help us choose the question for discussion on the broadcast of May 31 when America's Town Meeting observes its fourteenth anniversary. On that occasion, we want to discuss the *one* subject which is uppermost in the minds of the American people.

Is it a question on foreign affairs? Would it deal with a national problem such as housing or unemployment? Or do you consider such social problems as alcoholism or juvenile delinquency most important? Only you can tell us.

This is not a contest; there are no prizes. It is just a sincere desire on our part to discuss—on our anniversary program—the one question which is of paramount interest to Town Meeting listeners. We'll look forward to hearing from you. Mail your suggestion to Town Hall. New York 18.

Now to preside over tonight's discussion, here is our moderator, the President of Town Hall, New York, and founder of America's Town Meeting, George V. Denny, Jr. (Applause.)

Moderator Denny:

Good evening, neighbors. Tonight, we consider the third in a series of Town Meetings on the problem of our national security. We've explored five different approaches to peace during the last two weeks, including the proposed defense pact with Western Europe. Tonight, we come to grips with a question, "Is There Any Defense Against Atomic Warfare?"

Since the publication of David Bradley's book last fall, called, No Place To Hide, and General Groves' article in Cosmopolitan magazine last month, we ordinary human beings have been doing a good deal of thinking about this subject, which we somewhat put aside when we couldn't get the Russians to accept the Baruch Plan for international control of atomic energy.

It was General Groves, you remember, who headed the Manhattan project which produced atomic energy and the atomic bomb.

Dr. Bradley was one of the army doctors who went to Bikini to observe the test of an explosion of an atomic bomb over and under the water.

We cannot take the concern of these distinguished authorities lightly. We, therefore, invited them and an eminent Nobel prize winning physicist, Dr. Harold C. Urey, and United States Senator Brien McMahon of Connecticut, chairman of the Joint Congressional Committee on Atomic Energy and author of the McMahon Act, under which we are now operating, to discuss this subject with us here this evening. "Is there any defense against atomic warfare?" If so, and if not, what should we do about it?

We will hear first from a great atomic scientist from the University of Chicago. Like most of t miracles of this modern machiage, atomic energy was founded pure research. When Harold Ur produced what is called "hear water" in his laboratory at Colu bia University in 1934, I doubt he realized he was turning out essential element to be used in t manufacture of an atomic bor 10 years later. But, of course, I Urey had specialized in the stru ture of atoms and molecules as those mysterious, invisible, but u believably powerful properties matter, so he might have know that one day they would be us by man either for his benefit destruction.

It is to keep men from following the latter course that Dr. Urey has been raising his voice in all part of the country since the first born fell on Hiroshima. Dr. Urey, where you tell us now, is there any of fense against the atomic born Dr. Urey. (Applause.)

Dr. Urey:

Mr. Denny, ladies, and gent men. Is there a defense again atomic bombs? This question is been asked over and over against that fatal day in Augu 1945, when the first one announce its presence to the world.

Scientists have said that there no defense against atomic warfa. This was too brief a statement a complex problem. This problems again raised by Dr. Bradley we the publication of his diary of Bikini experiences.

Are there defenses against machine guns? Or submarines? Or airplanes with ordinary bombs?

Well, yes, there are defenses, but are they effective? Did they prevent the destruction of 20 million tons of ships of the world during World War II? Did they prevent the destruction of the cities of Germany and Japan?

The answer is, of course, "No."
But there is a defense against weapons. There was a defense against spears and swords. It was gunpowder.

There is a defense against rifles. It is machine guns.

There is a defense against wooden ships. It is ironclads.

These weapons I have mentioned have become largely obsolete, but only with the introduction of more effective weapons.

There is a defense against atomic bombs. I don't know what it is. It may be a more destructive atomic bomb. It may be biological warfare. It may be some idea hatching in the university laboratories of this country, or other countries.

If you are asking is there a defense that will prevent this weapon from producing a destruction in a coming war even more extensive than that of World War II, then there is no defense.

Let us consider some things which are not defenses against atomic bombs or against the real problem of this century, namely, technicological war. How about our extensive defense measures costing us 15 billion dollars and

the wasting of our material resources of steel, and so forth, and of the valuable years of our youth, and, well, many things which are only commanded by dollars? This will enable us to win the next almost inevitable war, but it will not prevent the war.

I am not against such defense, though I am sorry that it is necessary. I am only not deceived. It will not prevent war and the effects of bombs.

Military defense is not a proper defense against atomic bombs. General Groves. How about secrecy of which we hear so much? Well, we can have secrecy and a police state, eventually, but in that case, no democracy. Even from a purely military sense, we probably lose more than we gain by our hysterical witch hunts. But secrecy means eventually, if carried to lengths easily imagined in our search for a defense against modern weapons, a police state. such as Nazi Germany, Fascist Italy, or Communist Russia. What a defense!

But wait, there is a defense, but only one. It lies in the fields of politics, Senator McMahon. It is in world government. The manufacture of atomic bombs could be prohibited by law in the United States, and the law could be effectively enforced. It is not a technical problem. It is a political problem.

Only with a reign of law and order on this planet of the same kind that exists in the United States and some other countries of the world is there a defense.

Of course, this is easily said, and it is easier to say that the cure is impossible, though most people will agree with the statement.

A more proper question is, "How can it be secured?" It cannot be secured by the route of national defense, though national defense is necessary in the modern world. It cannot be secured by giving secrets away, though we possibly are more careful with our secrets than is good for us.

It can be secured only through the ultimate establishment of government, and that government must eventually include all the present nations of the planet. Thank you. (Applause.)

Moderator Denny:

Thank you, Dr. Urey.

When our government undertook, in 1942, the gigantic, discouraging, and almost impossible task of attempting to manufacture an atomic bomb which included the production of atomic energy, it turned to one of the most highly skilled engineers and ablest administrators in the United States Army, Lieutenant General Leslie R. Groves.

This two billion dollar project known as the Manhattan Project, involving more than 600,000 Americans, was one of the most amazing achievements of our time. General Groves is now vice president of Remington Rand, Incorporated, and director of the laboratory of Advanced Research. We are happy

to welcome to Town Meeting Geral Leslie R. Groves. Gener Groves. (Applause.)

General Groves:

Mr. Denny, ladies, and gent men. Mine is not a message despair, but of hope. America h faced serious situations before. V will come through all right.

Even Dr. Bradley, who followed me, really doesn't look as scar as his words which followed might indicate to you. You don't have hide under your beds tonight.

I will deal with only one phase of our defense, but it is the me important phase, by far. It is ported to me that soon after told Japan that we had dropp an atomic bomb on Hiroshin the Japanese high command he a conference. At this conferent they asked certain Japanese eperts, "How can we defend cities against the atomic bomb. The answer was this: "Keep enemy planes from flying over cities."

There has been no change in situation since that time. How we keep enemy planes from fly over the United States? The band only sure way is to avoid was long as there are nations er ous of our freedoms and of standards of living, we will have strive to our utmost if we are have peace without sacrificing principles.

War cannot be avoided men by the wishful thinking of American people. The Congres the United States will not declare war without the whole-hearted support of the country, and the American people of today will not be in favor of starting a war of their own volition. Therefore, we can only become involved in war through the action of some aggressor nation.

I ask you whether in modern times any war has been started by an aggressor nation where the leaders of that nation did not believe that certain, quick, and cheap victory was to be achieved?

That was what the Kaiser thought when he started World War I. That was what Stalin thought when the Russians attacked Finland. That was what Hitler thought when he started World War II. That's what the Japanese thought when they started their Chinese incident.

They were all wrong, and they all paid the price, but others have paid also, and among them, the United States, and we are still paying, and the end is not in sight.

It is not enough for us to know that we can defeat any nation which attacks us. That knowledge will not keep us at peace. The leaders of all potential aggressor nations must know that we are sure to win if war is to be avoided. They must know, if they attack us, their punishment will be swift and sure, that we have armed forces capable of prompt, certain, effective, terrible retaliation.

If we are to do this without extravagance, we must rely on the atomic bomb as a weapon around which our reply will be built. A retaliatory force, depending upon the atomic bomb as its principal weapon, must include the technical capacity to insure that the bombs will be as nearly perfect as human ingenuity and skilled supervision can make them.

It must have the air forces necessary to deliver the bombs on the desired targets. These air forces must have adequate bases. These bases must be held against enemy attack. Some of them may have to be taken by force of arms. They will all have to be supplied, many of them by sea transportation.

To do all this requires not only air forces, but adequate ground and sea forces. This retaliatory force must not be used for any other purpose, no matter what the temptation.

It must not be used for defense. To do so might well spell disaster for us all. Don't misunderstand me. The future of our Nation is too precious to place sole reliance on a single weapon. We all carry spare tires on our automobiles.

Our country must not depend upon a single weapon or a single theory. Like political theories, military theories quite often become outmoded. That is fortunate for mankind, for otherwise the aggressive dictator would have such an overwhelming advantage that the world could not cope with it.

We must have adequate military strength in addition to this retaliatory force in the event that it should fail to achieve its mission. This means that we must not neglect our other ground, sea, and air forces. They must be able to stand alone and to win, if necessary, without the bomb.

Today, as in ancient times, defeated nations are destroyed nations. We must not be defeated! We will not be defeated! (Applause.)

Moderator Denny:

Thank you, General Groves, Dr. David Bradley, a native of Madison, Wisconsin, graduated with highest honors from Dartmouth College in 1938, and turned to surgery after a brief career of writing. He reported for army duty in July, 1945-six weeks before Hiroshima-where he was trained for the specific job of a radiological monitor for the Bikini test. Dr. Bradley was with the air group during the main activity out at Bikini, but when this operation was over, he was one of the reduced group assigned to stay with the fleet for the next few months and make such observations as were possible.

His book, No Place To Hide, which has proved so popular in the regular edition that it is coming out this month in a 25-cent edition, is the result of these observations. Dr. David Bradley, welcome to Town Meeting. (Applause.)

Dr. Bradley:

Mr. Denny, ladies and gentlemen, imagine an atomic mine blowing up in the Hudson River, with the wind a little south of west; a flash, a rumble of thur der, a gigantic chimney of water suddenly materializing, its to enshrouded in a boiling mass of clouds.

This fantastic waterspout woul hang there for a moment and the start falling in sheets of water. The spray and steam at the base woul surge over the ships, the dock the warehouses along the near-beshore, but at a distance one woul only feel rain—gentle rain like a April shower.

The difference is that it would be a shower of radioactive poison Carried by the wind, this storm would move across Manhattan Queens, the Bronx, and northeat to the farms of Connecticut—jurain, but leaving a path, mile wide, of poisoned earth.

How dangerous is this radio activity?

To date, the best evidence we have is the underwater bomb to at Bikini. Twenty pigs were placed below decks in the sick bays five target ships. Fourteen day later all were dead from exposure to this radioactive rain.

It is true that they were heavi exposed and that the danger proportional to the dose.

All target ships were terrib contaminated. There was no geting rid of the dread poison. F weeks the Navy tried using wate soap, Foamite, lye, acid—nothing of the ships clean. I'm afraid the even the magic Duz would not have done it!

The problem of radioactivity is infinitely complicated, but in its essence it can be stated quite simply: that radioactive particles gotten within the body are dangerous in even very small amounts.

We don't know all the factors. We can't predict how many months or years it would be before you people could return to New York City again, but we do know that the people of Bikini, the natives of Bikini, have not been able to return to their island three years later.

We do know that the seriously contaminated ships at Bikini have never been used again, will never be used again, because most of them are sunk, being unsafe for duty, unsafe even for scrap.

Against such a weapon, what are the defenses? Can we prevent other nations from making atomic bombs? The answer is "No."

Can we prevent airplanes from invading our skies? The answer again is "No."

Can we prevent submarines from mining our coasts, or apparently friendly ships from mining our harbors, or bringing in smuggled bombs? Unfortunately, we cannot.

This country of ours is wide open. It is not a police state yet.

So I agree completely with Dr. Urey that the only defense is peace. Peace under law, and that means, of course, government. We must decide whether to seek survival through a military system or a legal system.

We are spending \$15,000,000 annually for the United Nations, and \$15,000,000,000 annually for military preparedness. That means, ladies and gentlemen, that America is investing \$1,000 in military power for every single dollar she is spending for international cooperation.

General Groves will tell you that we have no defense, but that America will win the next war. General Groves would consider it. I suppose, a victory, if at the end of this next war there remained one person, still alive, on earthan American, of course. (Laughter.) Tall, clean-cut, handsome, he would be singing as he pulls on his goggles, "Off we go, into the wild blue yonder." (Laughter and applause.) As a doctor and as a biologist interested in the survival of the race beyond this particular generation, I would rather see our friend saving, "Holy smoke, aren't there any babes left in this town yet!" (Laughter and applause.)

Moderator Denny:

Thank you, Dr. Bradley. You can tell what part of the Army he was in. (Laughter.)

In 1945, the United States Senate violated one of its unwritten rules when it made freshman Senator Brien McMahon, Democrat of Connecticut, Chairman of a Special Committee on Atomic Energy. This was not without reason, however, for prior to his election to the Senate, he was director of the Criminal Division of the Depart-

ment of Justice, where he rendered distinguished public service in recognition of his significant work as chairman of this special committee which drafted the Mc-Mahon Act for the control of atomic energy.

Senator McMahon was made Chairman of the Joint Congressional Committee on Atomic Energy, now a permanent committee, which he still heads. Senator McMahon, will you help us out of this dilemma tonight? Senator McMahon. (Applause.)

Senator McMahon:

Thank you, Mr. Denny, ladies and gentlemen. There is, as I see it, no real defense against large-scale atomic warfare. I think all of us, General Groves, David Bradley, and Harold Urey, agree that our only real defense is prevention of war.

Now, first, what is the United States doing to prevent that war from happening?

Second, what more must we do if we are to have a chance of success?

As for the first, we have engaged for the past year in the reconstruction of Western Europe. This we have done and will continue to do with the Marshall Plan, on the sound theory that communism fishes best in the misery, starvation and chaos which would probably have overtaken Europe if we had not acted in time.

We are also engaged in a tremendous effort to rebuild our military strength on the theory that if we are in a position to retal ate, we will be less likely to be attacked.

Both of these policies are necesary, but I contend that they are not enough. They are tremer dously expensive, to the poir where we are spending about I billion dollars for war preparation. This constitutes a terrific drain our free enterprise system, an added to our European Recover expenditures, imposes a terrific burden of taxation on our people

Where is this to end? What r mains to be done?

I contend that we must be about what I choose to call "Operation Freedom." We must bring how to all decent people everywher that we stand for peace, for liferty, for democracy.

We have not marshalled the spiritual and moral forces of makind, because we have not to our story as it should be told.

We have railed at the Iron Cutain, but we have made no intelligent effort to breach it. With might as well admit that maint nance of the Curtain by the Sovietis the thing that would enable them to lead their people to with upon the West.

It is the ability to keep the people ignorant that has enable Soviet leaders to break 29 treats in the last 25 years. The Russi people are not allowed to know that we Americans have made to most generous and practical people offer in history—our offer to gi

up atomic weapons, and to admit foreign inspectors inside our borders if other countries will do likewise

We must, therefore, apply our hearts and minds and resources to overcoming the Iron Curtain. We must gain the ear of the Russian people. I believe the Russian people want our friendship.

If we can reach the Russian people, if we can tell them about our offer to control the atom, if we can explain our way of life—our desire for peace and friend-ship—if we can do these things we will banish the fear and the menace of atomic war.

Because the danger is so great, it has occurred to me that President Truman should suggest a meeting with Mr. Stalin and the Prime Ministers of Great Britain and France. However, three such meetings have already been held and they led only to bitterness and futility. Now why? Because the meetings were staged without notice to or knowledge of the Russian people.

The Russian people have no real idea of what the heads of state and the foreign ministers have had to say, in past conferences, or any idea of what has been said in the United Nations.

If another meeting is held, then it, too, will inevitably fail unless Mr. Truman insists upon the right to address the Russian people through the Russian radio and the Russian press.

If all of the leaders stated their

views on the eve of negotiations, and if full publicity were given on both sides of the Iron Curtain, mankind would know what the meeting was all about, and all mankind could exert pressure on Russia to agree on a just and righteous peace program.

I am not so naive as to believe that one radio speech would accomplish all that I have in mind, nor that every negotiation should be held in the open as a kind of Town Meeting of the World, but there should be continuing reports during those meetings to all of mankind—say at three-day intervals—on all negotiations.

In this way we would make a real start toward that full and free and complete interchange of ideas and opinions between peoples, upon which, alone, a firm peace can rest.

It has long offended my sense of justice that the Kremlin can talk to our people, can appeal to American opinion, whereas we cannot talk to the Russian people or appeal to Russian opinion.

The Iron Curtain permits Moscow to swamp us with propaganda, but we cannot gain a hearing for our ideas in Russia.

Today, we have not achieved international control of atomic energy, and I contend that the Iron Curtain is primarily responsible. So long as the Iron Curtain exists with all that it implies, and so long as the atomic armaments race continues, our hopes for peace

are, I regret to say, a complete mockery.

We can strike a mighty blow against the war-breeding Iron Curtain if we propose a meeting with the heads of states and insist upon the opportunity to address the Russian people and the peoples of the world. (Applause.)

Moderator Denny:

Thank you, Senator McMahon.

Well, that's one Town Meeting I' like to be in on. I'd even be will ing to step aside and let somebod else moderate if we could get M Truman and Joe Stalin on th same program. Imagine that!

Well now, gentlemen, while w dream about that kind of Tow. Meeting, let's get up here aroun the microphone and continue ou discussion. General Groves, a few darts have been thrown in you

THE SPEAKERS' COLUMN

BRIEN MC MAHON - Senator Mc-Mahon, a Democrat from Connecticut, is chairman of the Joint Congressional Committee on Atomic Energy and author of the McMahon Act.

Born in Norwalk, Connecticut, in 1903, he has an A.B. degree from Fordham University and an LL.B. from Yale. From 1927 until 1933, he practiced law in Norwalk. He then became judge of the City Court of Norwalk. From 1933 to 1935, he was also special assistant to the U. S. Attorney General. He was acting assistant during 1935-36. He was elected to the U.S. Senate in

LESLIE R. GROVES—Lieutenant General Leslie R. Groves, now retired from active army duty is affiliated with Remington-Rand in engineering research. He was formerly director of the Manhattan Atomic Bomb Project. Born in Albany, New York, in 1896, he studied at the University of Wash-

ington and at the Massachusetts Institute of Technology, but in 1918 received his B.S. degree from the United

ceived his B.S. degree from the United States Military Academy. He also graduated from the Army Engineering School in 1921, from Command General Staff School in 1936, and Army War College in 1939.

During World War I, he was made a Second Lieutenant and advanced through the grades to Major General. In World War II, he was Chief of Operations and Deputy Chief of Construction Division resonnshile for Operations and Deputy Chief of Con-struction Division responsible for Military Construction Operations. He headed the Manhattan Project which developed the atomic bomb. He has received many awards for meritorious service.

HAROLD CLAYTON UREY-A Nobel Prize Winner, Dr. Urey is president of

the Emergency Committee of Atomic Scientists. He is head of the Institute of Nuclear Research of the University of Chicago, and was one of the scien-tists who helped to develop the atomic

Dr. Urey was born in Walkerton, Indiana, in 1893. He has a B.S. degree and a D.Sc. from the University of Montana, a Ph.D. from the University of California, and a D.Sc. from the University of Newark. Before his grad-uation from college, he taught several years in rural schools. From 1917 to 1919, he was a chemist with the Barrett

Chemical Company in Philadelphia.
During his teaching career, Dr. Urey
has been on the staffs of the University
of Montana, Johns Hopkins University, and Columbia. He is the author (with A. E. Ruark) of Atoms, Molecules and Quanta, and of numerous articles for scientific journals. He has specialized in the structure of atoms and molecular and production of the structure of atoms and molecular articles for the structure of atoms and molecular articles are related which the structure of atoms and molecular articles are related which the structure of atoms and molecular articles are related which the structure of atoms and molecular articles are related at the structure of atoms and molecular articles are related at the structure of atoms and molecular articles are related at the structure of atoms and molecular articles are related at the structure of atoms and molecular articles are related at the structure of atoms and molecular articles are related at the structure of atoms and molecular articles are related at the structure of atoms and molecular articles are related at the structure of atoms and molecular articles are related at the structure of atoms are related at the structure of atoms and molecular articles are related at the structure of atoms and molecular articles are related at the structure of atoms and molecular articles are related at the structure of atoms are related atoms are related at the structure of atoms are related atoms are related at the structure of atoms are re

cules and related subjects.

pavid Bradley—David Bradley, a graduate of the Harvard Medical School, had six months training in the Manhattan District prior to the Bikini atom bomb tests. He was sent along on the test to determine by means of Geiger counters and other instruments which areas were "too het" to be contracted as feel by investigation. hot" to be entered safely by investigators. He stayed with the fleet several months observing radioactivity. He is now training in surgery at the University of California Medical School.

Recently, Dr. Bradley's account of the Bikini tests was passed by the Office of Information Control of the U. S. Atomic Energy Commission. The story is told in No Place To Hide, which appeared in the Atlantic Monthly and also in host form

and also in book form.

direction. Perhaps you'd like to start this discussion.

General Groves: Well, it's something that's happened to me for many months, or almost years now -quotations and misquotationsand I'm kind of used to it and it doesn't bother me at all. Of course. that is not my idea of victory. I do not believe in the defeatist attitude for the United States. We've never had it, and we're not going to have it, as long as we maintain the fundamental principles on which our forefathers founded this country. I think it's about time that we remembered what happened to France with her defeatist attitude. Thank you.

Mr. Denny: Thank you. Dr Bradley, yes, sir?

Dr. Bradley: There is so much emphasis now being placed on air power as a method of security and of defense, I should like to raise a question of bombs smuggled into this country since air power would have no effect whatsoever on that. I should like to ask Dr. Urey whether, as a scientist, he considers it feasible, technically, to mine our cities without our knowing it?

Dr. Urey: I think that it would be possible to do this. I think it would be difficult. It's difficult to say more than just that. Of course, I think that with adequate police it would become much more difficult. An adequate police would be very expensive considering the long coastline that we have to guard.

Of course, if we did catch some-

one with a bomb, the thing I would always wonder is whether that was the only one, or whether there were some that we didn't catch.

Mr. Denny: Thank you. Senator McMahon has a comment. All right.

Senator McMahon: Mr. Denny, General Groves and I agree, as I have indicated, about the fact that we must be rearmed and we must be militarily prepared. I am not sure that we agree as to the extent of that rearmament. I was a bit taken with the General's observation that, not only must we have air power with, I suppose, the atomic weapons to go with them, but we must be strong on the land and strong on the sea.

That's fine, as a general statement of fact. But I am driven to think about the 16½ billions of dollars; I'm driven to think about the total of our annual budget—some 43 billions of dollars—and I'm going to tell you that armament races have never resulted in all history, as far as I know, in anything else except eventual conflict. (Applause.)

I do not believe that that is the answer to our situation. That's why I do not agree with the General that that, in itself, is enough. I see no end to the road with that kind of a program and that alone. That's why I say that we must mobilize these powers of spiritual and moral forces of the world behind the justice of our program if we are to be successful.

Mr. Denny: Thank you. General,

I think that calls for a comment from you, sir.

General Groves: I think, again, I'm having a new position forced upon me. I think the real position that I have taken is that, until the Iron Curtain can be penetrated and we can have this friendly feeling on the part of other nations—the desire for peace which we have—there is only one thing to do and that is to remain strong enough so that we will not be the defeated nation. (Applause.)

Dr. Bradley: I'd like to pursue this question a little further and ask General Groves how much money he would spend for defense for the military. If we gave him twice as much as they give the military now, would that be adequate? Where, in other words, can we decide, "This is enough for our protection?" That is what we have to know. (Applause.)

General Groves: All I can say on that is that I am not responsible for the expenditures or how they're made. That is the responsibility of the Senators, of the Administration, and it is impossible for me to state just how much money would be required. (Applause.)

Mr. Denny: Thank you. Now there are a great many eager people in the audience ready to ask questions, and while this audience gets ready for the question period, here is a message for you, our listeners.

Announcer: This is the 547th broadcast of America's town Meet-

ing, coming to you from Town Hal in New York City. In just a moment you will hear questions from the audience.

A complete transcript of to night's discussion is published in the Town Meeting Bulletin which you may obtain by writing to Town Hall, New York 18, New York, enclosing ten cents—pleased on not send stamps. Allow at least two weeks for delivery.

Some highly important subject will be discussed during the next few weeks, so instead of writing for a copy *every* week—why not send one dollar for the next eleven is sues? A full year's subscription is \$4.50; six months for \$2.35.

American youth will have its say on this program next month when we present our annual JUNIOE Town Meeting-a discussion by four high school students choses by the editors of Our Times and Town Hall. They will discuss the question "What Does Democracy Really Mean?" This year's Junio Town Meeting, originally sched uled for March 22, has been post poned one week—to March 29. The competition has closed and selection is now being made of the semi finalists from which the four nationwide winners will be chosen They will be brought to Town Hall New York, and you will hear then on March 29.

It's time now to let the audience in on tonight's discussion. For our question period, here again i Mr. Denny.

QUESTIONS, PLEASE!

Mr. Denny: Now we start over here with the gentleman in the brown suit.

Man: General Groves. Dr. Bradley, in his recent book, states that in the Manhattan district, we had a practice of high amputations of limbs and other parts of the body where there was exposure to plutonium through a direct blood channel. Having been in the Manhattan district, I do not remember this, and ask you if there is any truth in it.

General Groves: I cannot recall any such case, and I can't recall ever having approved any such policy or of any such policy being in existence. It certainly would not have been without my knowledge.

Mr. Denny: Mr. Bradley, yes. Dr. Bradley?

Dr. Bradley: I want to say on that—I'm very glad it's brought up—because in my training for the Bikini test—you see I was simply a doctor assigned to Bikini—that this is what was told me. Out there our work was actually sort of in the field as under battle conditions. I'm very happy to say that that is probably not the situation now, that certain methods of decontamination of individuals and other policies are effective and, therefore, we can discontinue that idea.

Mr. Denny: Thank you. Thank you, Dr. Bradley. The young man

on the front row in uniform. Yes?

Man: Dr. Urey. It has been suggested that our factories and cities be placed underground in natural and man-made caves to protect them from the danger of an atomic bomb exploding over them. Do you think that a large atomic bomb would be powerful enough to crack one of these caves and send the roof down on the installations inside?

Mr. Denny: Getting into Buck Rogers there now!

Mr. Urey: Well, I have visited one or two caves. I don't think you would find it possible, practically, to stay underground for any substantial period of time. I think it's a wholly impractical thing, except possibly for the war plants. But who cares anything about the war plants if they can no longer protect the people above the ground? No use in protecting the military unless they can protect us. (Applause.)

Mr. Denny: Thank you. Maybe the Army will be the safest place in the next war! All right. The lady in the blue suit.

Lady: Senator Mahone . . . Mc-Mahon. I'm sorry.

Mr. Denny: You could call him O'Brien, if you like. (Laughter.)

Lady: Don't you think that the Iron Curtain can be penetrated if President Truman goes to Russia to speak to Stalin?

Mr. Denny: Just say that a little more clearly. If President Truman goes to Russia to see Stalin, the curtain can be penetrated.

Senator McMahon: When Mr. Byrnes went to Moscow in 1945 to arrange for the United Nations Commission to discuss atomic disarmament, the Russian people knew nothing about it. I do not think it is important as to where the meeting is held. I would like to see it and think it should be held now in Washington. But the important thing is that, no matter where it is held, the people in Russia should have the opportunity to know our viewpoint. As far as I know, with one exception - the printing of Jimmy Byrnes speech in London on a dare in Pravdawith that one exception, the Russian people are totally ignorant, totally misinformed as to our offer on atomic energy, and as to our position on the other points at issue between us. (Applause.)

Mr. Denny: Thank you. Take a question in the first row balcony.

Man: Apropos of Dr. Urey's suggestion of smuggling the bombs in, I'd like to ask: Is it possible to ship a bomb into the United States in pieces, assemble it in, let's say, the Empire State Building, and then have it detonated?

Dr. Urey: Yes! It is possible; and not only possible, but it is not too difficult under our present system of border control.

Mr. Denny: They're scaring me to death. (Laughter.) We're too near the Empire State Building.

All right. Let's take this gentle man down here who had a question for Senator McMahon.

Man: Senator McMahon. Wil using the atomic bomb on Sovie Russia put a stop to atomic warfare?

Senator McMahon: Certainly there is no intention upon the par of any responsible person that know of, sir, in this country, the drop any atomic bombs on the Russians. I would like to drop bomb of understanding if you can purely propaganda bombs—telling the truths to the Russian people but I do not believe that there are any responsible people who be long to what I call the DBN school which is the "Drop Bomb Now school. (Applause.)

Lady: Dr. Bradley. If atomic energy were wholly developed, no for bombs but for useful industria purposes, might the results no help eliminate economic causes of war? (Applause.)

Dr. Bradley: I don't like to pos as an authority on anything. I'r perfectly sure I don't know muc about the economic uses, in th future, of atomic energy. It seem to me that the beneficial peacetim uses of atomic energy would b based entirely upon the lack of war. The emphasis must be o peacetime instead of use. Until w have achieved anything like pead to stop this armament race which means war, I don't see why worr about energy for anything—cance research or anything else. (A) plause.)

Mr. Denny: Thank you. The gentleman in the blue suit.

Man: General Groves. Have you heard of Dr. Blackett's book, Fear, War and the Bomb? If so, what do you think of his observations?

Mr. Denny: You mean Dr. Blackett's book—the one published yesterday? Yes.

General Groves: Yes. I've heard about it and I don't agree with his conclusions. I think that is about as far as I would like to go.

Mr. Denny: Well, General, just so the radio audience which might not know what this question is all about, his general conclusion is, isn't it, that the bomb is just another weapon and is not nearly as dangerous as the people here on this platform, tonight, think it is?

General Groves: Yes, and one other thing, and that is that in all of our attempts to get international agreement, it's our fault that we haven't had it, rather than Russia's, and, of course, he is wrong. (Applause.)

Mr. Denny: All right. Thank you. Dr. Bradley has a comment on this.

Dr. Bradley: Any book on this subject is so serious that one should consider it carefully. I only wish to point out that this book, if you consider its index, refers to the Bikini underwater tests only in two small paragraphs. He apparently doesn't understand that the underwater bomb is an entirely new weapon. (Applause.)

Mr. Denny: Thank you. The gentleman over there.

Man: For Dr. Urey. Wouldn't it diminish the chances of warfare if we stopped enabling shrewd men to make fortunes out of war while other men are dying? (Applause.)

Dr. Urey: There are many causes of wars. There are many evil people in the world. Most of the people of the world are good. You cannot possibly stop wars by worrying about what good people will do or won't do. You must think about what you do about wicked people and the only cure for wicked people, that has ever been discovered, is to arrest them, bring them before a court of justice, and sentence them to jail. That is the sort of thing that's required to get peace. Many other proposals always involve securing peace by dropping bombs or making war on somebody as a road to getting there. You get peace by working for government and no other way. (Applause.)

Mr. Denny: Thank you. The little lady with the red hair.

Lady: I'd like to ask Senator McMahon how he suggests that we get the ear of the Russian people and let them know that we are peace-loving? (Applause.)

Mr. Denny: Well he told you one way, but, Senator?

Senator McMahon: There are a number of ways yet untried that we could attempt to do just that. But I think, for the present limited time, I would have to emphasize to you the value of having any peace conferences reported to the Russian people. After all, that is the kind of thing that can be done over the radio. That is the kind of thing that could be done through the United Nations' supervision inside of Russia, as well at it could be in other of the major countries, of the views that were being expressed by the heads of states.

If the Russian leaders would not agree to that, then there is no earthly use in having any conference. (Applause.)

Mr. Denny: Thank you. The young man down there.

Man: To General Groves. Granted that our potential enemies shall have completed atomic weapons by 1952, will it not be too late for us to retaliate, if at all possible?

General Groves: No, a retaliation by us would come after an attack on us—not before. The problem is to be certain that we can deliver that attack in such a way that will keep the other one from starting it first. You don't see a small boy hitting a big boy unless the big boy doesn't want to fight. As soon as the small one realizes the big one wants to fight, why there's no more pestering of the big one by the little one. (Applause.)

Mr. Denny: Thank you. The man on the aisle there.

Man: By what means can sovereign nations be persuaded to yield their sovereignty to attain

the objective of world peace and unity?

Dr. Urey: By persuasion, d course. The problem that we fac at the present time is convincin the peoples of the free countries of the world who can listen to u that this is a proper solution Specifically our problem is the United States. Activities of this kind are going on in all of the fre countries of the world at the pres ent time, and very actively in thi country. The way people will lister to this question is really surpris ing, inside the United States, and as I learned last year, in countries of Western Europe. It's really sur prising. It's a radical idea; voi don't expect people to listen with out objections. It's surprising how effective this sort of an appeal is (Applause.)

Mr. Denny: Thank you. The young man in the balcony.

Man: Senator McMahon. Morapparent emphasis on developing peaceful uses of atomic energy might demonstrate the United States good will. Has industry been given sufficient opportunity in this field?

Senator McMahon: I believe that the Atomic Energy Commission has made considerable effort to bring all kinds of industry into the program. There has recently been written a critical report suggesting further information that could be given out to industry and further ways in which industry could be more effective.

I would like to impress upo

you, though, that a great deal of our research, to the tune of hundreds of millions of dollars, is devoted to peacetime uses of atomic energy. It is true that out of that research may come war uses, but also may come peace uses.

I do not pretend to be a scientist, but I know that you cannot anticipate what the end use is going to be. I think we have done a very great deal in order to advance peacetime uses of atomic energy in the last two years. (Applause.)

Mr. Denny: Thank you. The young man on the other side.

Man: I'd like to know if anything is being done right now to insure some measure of protection for the citizens of the large cities, such as New York—some small measure of protection, however small it may be?

Mr. Denny: Yes. Dr. Bradley. You may be asking the wrong man but it's all right. Go ahead, Dr. Bradley.

Dr. Bradley: There is a very extensive plan, called the "Civil Defense Plan," which was written by a gentleman by the name of Hopley and his co-workers for Secretary of Defense Forrestal. This is an extremely involved plan, but it does give a great many measures which are of some help for people in bombed out areas. One should read that plan carefully so as to understand what a tremendous job any kind of civil defense will be; for example, merely the problem of being aware of areas of con-

taminated surface—radioactive contamination—and what to do about it. If you analyze the report, it would seem that you'd have to have at least a graduate of physics in every house of every block in the country.

Mr. Denny: But, Doctor, what he wants to know is how are you going to prevent us from being bombed. He's not interested in what happens after it is bombed. I think that's the purport of your question, wasn't it?

Man: No, it was-

Mr. Denny: Oh, perhaps I misunderstood you.

Man: Perhaps I'm a bit confused. (Laughter.)

Mr. Denny: As we all are. Go right ahead. (Laughter.)

Man: Would there be anything such as an underground shelter, such as were made during the last war, to assure citizens some protection from the bombs?

Dr. Bradley: There are many measures you can take. The people in Hiroshima who were near the blast and were not killed were those down in deep cellars. Yes, you can retire to cellars. You can also put some of your cities underground, although I don't see anybody doing it. You can also take measures with people to remove radioactive contamination that has gotten within their bodies. Whether you can get it all is a question.

There are so many factors involved. For example, how will you supply blood to bombed out areas?

The goats that returned from Bikini from the first test and survived required something like 150 gallons of blood per goat to make it. Can we do that for a population of a bombed-out city?

Mr. Denny: Yes, housing is hard enough above the ground, Doctor, and you're going to suggest sinking it underground. (Laughter.) All right, the third row gentleman here.

Man: I'd like to address this to General Groves. General, is there any defense against an aggressor nation besides retaliation? Has the Government given any thought to the decentralization of our vulnerable and congested cities against a possible slaughter?

Mr. Denny: We've just been discussing that, but go ahead.

General Groves: I can't answer the question about what the Government is considering, but I can tell you that if we attempt to decentralize as some advisers-selfappointed-have told us to do, we will lower the standard of living to such an extent that it would be about ten wage decreases instead of the increases with which we are familiar. Automobiles would cost you \$75,000 apiece, instead of what they cost today, and we would just do without. We would revert to the situation that existed in this country in the early 1800's.

Man: Aren't we putting business first rather than the protection of the people?

General Groves: No, after all, the standard of living is what the people want, and that's the size of it.

Mr. Denny: Thank you. The gentleman right here.

Man: Dr. Urey. In your opinion was the Soviet Government justified in so staunchly refusing to accept the Baruch proposals for atomic energy?

Dr. Urey: I do not believe that the Baruch proposals for the control of atomic energy, as they were stated by Mr. Baruch, would have worked. I think they were a good place to start and I hoped some body else would make the proposal that it is necessary to go ever further.

But that is not the grounds. M grounds are not the grounds upon which the Soviet Government crit icized those proposals. Before the were ever presented, it is obviou to me that the Soviet Governmen had met in the Politburo-no on else need be represented in Russi -and a complete design as t what they would propose wa drawn up. Mr. Baruch's proposal had nothing to do with their pro posals. Their proposals were sim ply a renunciation treaty of th Kellogg-Briand type which w learned before World War 1 wouldn't work. Why do it again But that is their proposal. (Ag plause.)

Mr. Denny: All right. Than you, Dr. Urey. Now, while ou speakers prepare their summarie here is a special message of interest to you.

Announcer: If you are a banke

an automobile dealer, a department store executive, an industrialist, or operate any type of retail store—you will be interested in knowing that "America's Town Meeting" is a co-operative program. By that we mean: local business firms throughout the country can sponsor this program, at surprisingly low cost, on their own ABC station. In fact, Town Meeting is available for sponsorship on the station to which you are now listening.

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Now for the summaries of tonight's discussion, here is Mr. Denny. Mr. Denny: Our first summary tonight is from Senator McMahon.

Senator McMahon: I think that the prime objective of our statesmen must be to prevent another and completely disastrous war. We must promote order in the world. That's number one. We must take wise military precautions, and by that I mean wise military preparedness. Above all, we must educate the peoples of the world to the scientific facts which atomic energy has brought into being, and we must, within the United Nations, marshal such strength behind our position, which I believe to be objectively true and right and just, that no country can do anything else but accede to that overwhelming moral, spiritual, and physical force. (Applause.)

Mr. Denny: Thank you. Now, Dr. Bradley.

Dr. Bradley: I believe that the underwater bomb is a totally new weapon. I believe that there is no adequate defense against it. I believe that there is no adequate method of decontamination either for ships, or cities, or farm land.

Finally, I think that, in any constructive policy, America must take the leadership because in peace we have the most to give—life, liberty, the pursuit of happiness—and in war we have, you and I, the most to lose. (Applause.)

Mr. Denny: Thank you. Now, General Groves.

General Groves: Let's keep our feet on the ground. Let's not accept the defeatist attitude of Dr. Bradley, even when he throws figures around as glibly as he has. As to Senator McMahon's hopes, do any of you really believe that the Russian people of today would be permitted to hear the facts? As for Dr. Urey, until the Iron Curtain comes down to stay, we cannot think of world government. And when it does come down, we won't need world government. (Applause.)

Mr. Denny: Thank you. Dr. Urev.

Dr. Urey: The problem raised is not that of the bomb, but the problem of modern war. War has been solved on limited areas of the earth, for a limited time, by government and by no other method whatever. We need planetary government, but we want a free government, and we need to work toward that end. In Washington's words, under similar circumstances, "Let us raise a standard to which the wise and honest can repair. The event is in the hands of God." (Applause.)

Mr. Denny: Thank you, Dr. Urey, General Groves, Dr. Bradley, and Senator McMahon. Next Tuesday, your Town Meeting will discuss the subject which has been at the top of our mail requests from listeners for several weeks—"Should We Adopt a Compul-

sory National Health Insurances
Program?"

Our speakers will be Senator H. Alexander Smith, Republican of New Jersey; Dr. Morris Fishbein, editor of the Journal of the American Medical Association; Oscar Ewing, Federal Security Administrator; and a fourth speaker to be announced. It promises to be one of the most important Town Meetings in our fourteen years on the air.

The following week; March 4s our subject will be "Should Communists Be Allowed To Teach in Our Colleges and Universities?" The members of the panel will be Dr. Harold Taylor, president of Sarah Lawrence College, Bronks ville; Roger Baldwin, director of the Civil Liberties Union; Dr. Raymond B. Allen, president of the University of Washington, in Seattle; and Dr. T. V. Smith, profess sor of Syracuse University, in Syracuse, New York.

If any of you would like copies of tonight's discussion, send tencents to Town Hall, New York 18: New York, and a copy of the Town Meeting Bulletin will be mailed to you. Please do not send stamps and allow at least two weeks for delivery. Plan to be with us next Tuesday and every Tuesday at the sound of the crier's bell.